

Work Order ID 137041

Wednesday, September 23, 2015 12:44:17 P

137041

Page 1

Item ID: DSI 9730-011 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Shim Installation
 Start Date: 9/23/15 Start Qty: 10.00 ***10*** Cust Item ID:
 Required Date: 9/25/15 Req'd Qty: 10.00 ***10*** Customer:
 Reference:

Approvals: Process Plan: [Signature] Date: 159-83 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
DSI 9730	A								
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc.Control -USB or Paperwork	Photocopy bluefile & type labels per PPP DSI9730-011 CHG001								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									
120	QC4- 100% Inspect kits for completeness	0.00							
120									
QC	Memo	0.00							
Quality Control									

Rush

MCS 150925
10

10x
DAS
6
9-89

10
DAS
SEP 27 2015
9-89

SEP 25 2015 10x

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence							
		☐ OTHER : _____							

Work Order ID 137041

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Page 2

Item ID: DSI 9730-011

Accept

N900040100

Setup Start

NS1

Revision ID:

Item Name: Shim Installation

Stop

NS2

Start Date: 9/23/15

Start Qty: 10.00

10

Cust Item ID:

Required Date: 9/25/15

Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run

Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

130

Packaging

Packaging

0.00

F6 125

10

DAS
6
9-23

SEP 25 2015

Memo

0.00

Packaging

Identify and pack for shipping as per PPP DSI9730-011

140

140

QC

Quality Control

QC21- Final Inspection - Work Order Release

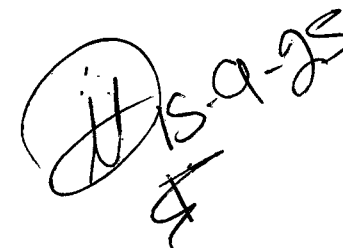
0.00

Memo

0.00

SEP 23 2015

MCS



DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

Picklist Print

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Page 1

Work Order ID: 137041

137041

Parent Item: DSI 9730-011

DSI 9730-011

Parent Item Name: Shim Installation

Start Date: 9/23/15

Required Date: 9/25/15

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP REV:A 15.09.04 NEW ISSUE DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D5305-1 *D5305-1* Shim	DAS 6 9-89	Manufactured	No				Each	0.0000	**	20			
MS21920-24 *MS21920-24* Clamp		Purchased	No				Each	72.0000	**	20		DAS 27 9-89	

137042

58

DAS
6
9-89

Location

Loc Qty

Loc Code

FG	2	
117998	2	
LG050	70	
120079	1	
m129317	5	
m132045	24	
m133031	40	

20

SEP 24 15

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		☐ OTHER : _____					

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D119-796 REV. D AND
INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D119-796 REV. 2

REF CANADIAN: STC SH14-45

REF FAA STC: SR03504NY

REF EASA STC: 10052022

1.0 PURPOSE

The purpose of this Dart Service Instruction is to add an aluminum abrasion strip (shim) to the D119-796-101/-103 Fwd Crosstube under the OEM lower clamp assy (P/N 109-0570-20-107) to reduce the abrasion and increase the clamping force on the fwd crosstubes. The DSI9730-011 Kit is available for customers who prefer to use pre-fabricated shims from Dart.

2.0 INSTALLATION

Note: To perform the following installation, the fwd crosstube must be lowered from the aircraft structure sufficiently to allow a minimum gap of 0.50 inches between the mating surfaces of the 109-0570-15-101 Fitting Assy and the D5124-1 Fwd Support.

- 2.1 Remove the (qty 2) 109-0570-20-107 Clamp Assy and (qty 2) outboard MS21920 Clamps and Cushions. Retain hardware.
- 2.2 If not using the DSI9730-011 Shim Kit, fabricate two rectangular shims as per Figure 1 using 16 gauge (0.051 in thk) aluminum. Break all sharp edges 0.010 to 0.025 max. Treat with chemical film material (Alodine 1200 or 1201) per MIL-C-5541.
- 2.3 Form the shims to fit the underside of the crosstube in the location shown in Figure 2. Note that the long axis of the shim is along the circumferential direction of the crosstube.
- 2.4 Abrade mating surfaces of the shims and crosstube with Scotch Brite and remove residue. Apply a minimum 0.020"-0.040" (0.51mm - 1.02mm) thk layer of Proseal 890 B1/2 or B2 on the concave surface of the shims and install in the location shown in Figure 2.
- 2.5 Apply clamping pressure using the outboard MS21920 Clamps with Cushions as well as an additional MS21920 Clamps as shown in Figure 2. Tighten the MS21920 Clamps sufficiently to allow even pressure on the circumference of the shims (do not torque the MS21920 Clamps). Allow Proseal 890 to cure for minimum of 36 hours with clamping pressure.
- 2.6 Torque outboard MS21920-24 Clamps securing the D5124-1 Fwd Supports to the crosstube to 80-100 in-lbs (9.0 - 11.3 Nm)
- 2.7 Remove additional MS21920 Clamps and re-install the D119-796-101/-103 Fwd Crosstube with 109-0570-20-107 Clamps in accordance with applicable Maintenance Instructions.

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED

BY:

D. SHEPHERD (DE # 02)

DATE: 15.08.20

CERT. NO.: SH14-45

ISSUE NO.: 1

A	NEW ISSUE	AP	15.08.20
REV.	DESCRIPTION		BY DATE
DESIGN	AP	DART AEROSPACE, LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	AP		
CHECKED	92	DRAWING NO.	REV.A
MFG. APPR.	N/A	DSI 9730	SHEET 1 OF 3
APPROVED	[Signature]	TITLE	SCALE
DE APPR.	[Signature]	FWD CROSSTUBE SHIM INSTL	NTS
DATE	15.08.20	COPYRIGHT © 2015 BY DART AEROSPACE, LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE, LTD.	

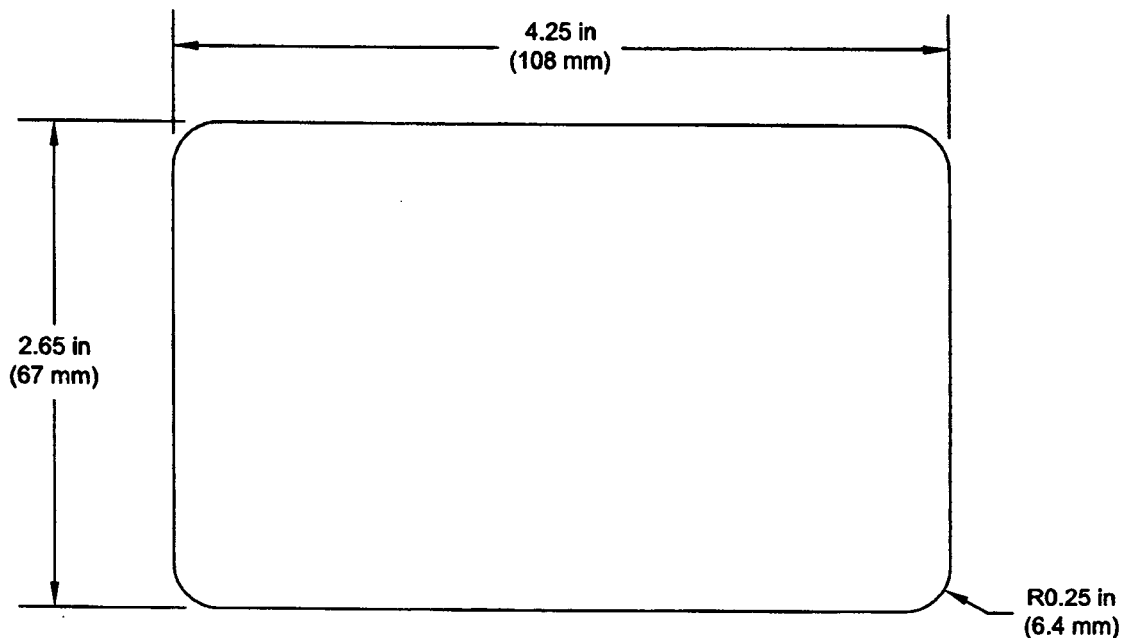


Figure 1: Fwd Crosstube Shim Dimensions (D5305-1 SHIM)

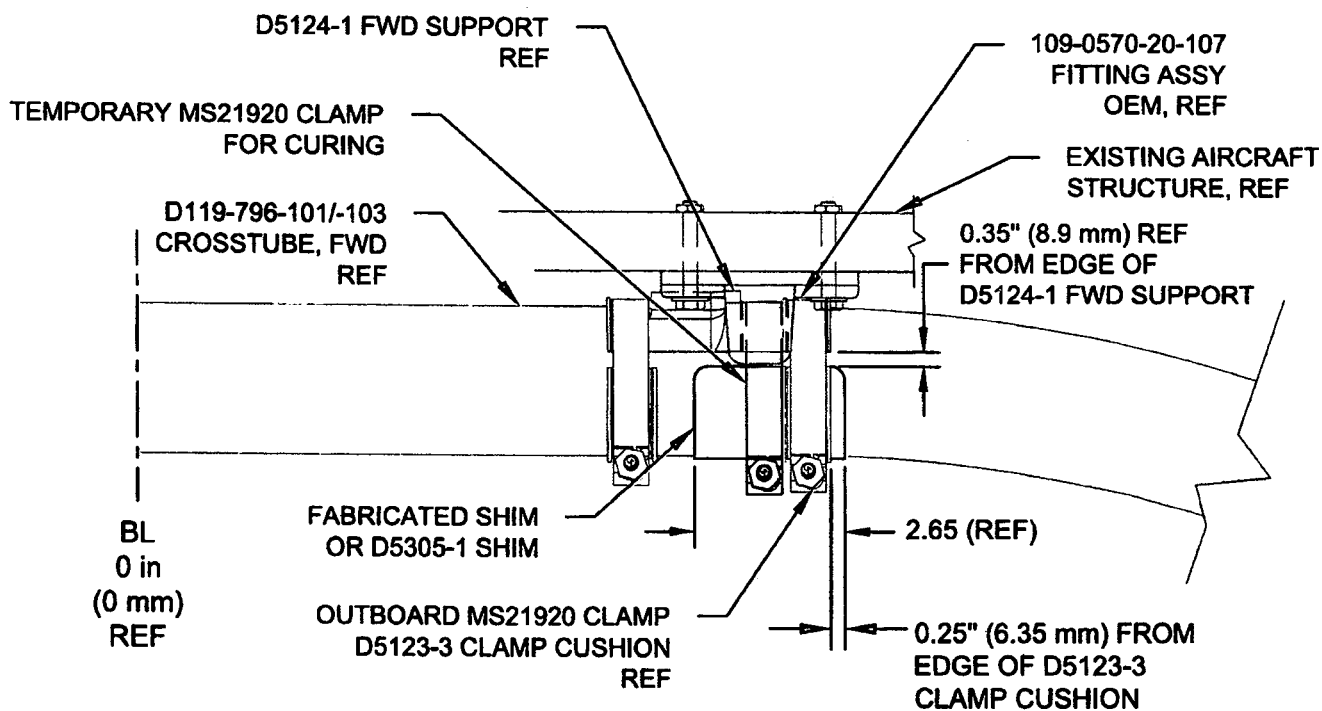


Figure 2: Fwd Crosstube Shim Installation

DESIGN	AP	DART AEROSPACE, LTD HAWKESBURY, ONTARIO, CANADA	
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CHECKED	<i>g</i>	DRAWING NO.	REV.A
MFG. APPR.	N/A	DSI 9730	SHEET 2 OF 3
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	FWD CROSSTUBE SHIM INSTL	NTS
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3.0 PARTS LIST

QTY -011	PART NUMBER	DESCRIPTION
	DSI9730-011	SHIM KIT
2	D5305-1	SHIM
2	MS21920-24	CLAMP

4.0 WEIGHT AND BALANCE

There is negligible weight and balance change associated with this modification.

DESIGN	AP	DART AEROSPACE, LTD HAWKESBURY, ONTARIO, CANADA	
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CHECKED		DRAWING NO.	REV.A
MFG. APPR.	N/A	DSI 9730	SHEET 3 OF 3
APPROVED		TITLE	SCALE
DE APPR.		FWD CROSSTUBE SHIM INSTL	NTS
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